IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A viewing port for a process chamber, comprising:

a viewing window to permit optical access to said process chamber;

a mounting to couple said viewing window to said process chamber, said mounting comprising a first connection member and a second connection member; and

a viewing window cleaning apparatus coupled to said mounting and disposed between said viewing window and said process chamber, and configured to form a cleaning plasma in a cleaning plasma region of said mounting, said viewing window being coupled to a first side of the viewing window cleaning apparatus by said first connection member and said process chamber being coupled to an opposite side of the viewing window cleaning apparatus by said second connection member.

Claim 2 (Original): The viewing port as recited in claim 1, wherein said viewing window cleaning apparatus comprises a RF source and a plasma source.

Claim 3 (Currently Amended): The viewing port as recited in claim 2, wherein said viewing window cleaning apparatus further comprises an impedance match assembly and a plasma generator both contained within an outer housing.

Claim 4 (Original): The viewing port as recited in claim 3, wherein said plasma generator comprises an inductive coil.

Claim 5 (Original): The mounting as recited in claim 1, further comprising at least one array of magnets coupled to said mounting.

Claim 6 (Original): The mounting as claimed in claim 5, wherein at least one of said magnets of the array comprises a permanent magnet.

Claim 7 (Original): The mounting as claimed in claim 7, wherein at least one of said magnets of the array comprises an electromagnet.

Claim 8 (Original): The mounting as recited in claim 1, further comprising a gas injection system coupled to said cleaning plasma region.

Claim 9 (Original): The mounting as recited in claim 8, wherein said cleaning plasma etches by- products deposited on said viewing window through physical etching.

Claim 10 (Original): The mounting as recited in claim 9, wherein said gas injection system provides at least one of argon, krypton, and xenon.

Claim 11 (Original): The mounting as recited in claim 8, wherein said cleaning plasma etches by- products deposited on said viewing window through chemical etching.

Claim 12 (Original): The mounting as recited in claim 11, wherein said gas injection system provides at least one of NF_3, CF_4, SF_6, C_2F_6, $CC1_4$, and C_2C1_6.

Claim 13 (Original): The mounting as recited in claim 8, wherein said cleaning plasma etches by- products deposited on said viewing window through physical and chemical etching.

Claim 14 (Original): The mounting as recited in claim 13, wherein said gas injection system provides at least one of argon, krypton, xenon and at least one of NF_3, CF_3, SF_6, C_2F_9, $CC1_4$, and C_2C1_6.

Claim 15 (Original): The mounting as recited in claim 1, comprising a viewing window supporting section configured to position said viewing window at a predetermined position relative to a position of the process chamber.

Claim 16 (Original): The mounting as recited in claim 15, wherein the predetermined position is selected so that a substantial amount of by-products do not travel to said viewing window.

Claim 17 (Original): The mounting port as recited in claim 8, wherein said gas injection system is configured to flow a gas into the cleaning plasma region so that a pressure is generated in the cleaning plasma region, the pressure substantially opposing a propagating direction of by- products.

Claim 18 (Original): The mounting as recited in claim 8, further comprising at least one array of magnets coupled to said mounting.

Claim 19 (Original): The mounting as claimed in claim 18, wherein at least one of said magnets of the array comprises a permanent magnet.

Claim 20 (Original): The mounting as claimed in claim 18, wherein at least one of said magnets of the array comprises an electromagnet.

Claim 21 (Currently Amended): ~~An improved~~ A process chamber~~, the improvement~~ comprising a viewing port coupled to said process chamber, wherein said viewing port comprises:

a viewing window to permit optical access to said process chamber;

a mounting to couple said viewing window to said process chamber, said mounting comprising a first connection member and a second connection member; and

a viewing window cleaning apparatus coupled to said mounting and disposed between said viewing window and said process chamber, and configured to form a cleaning plasma in a cleaning plasma region of said mounting, said viewing window being coupled to a first side of the viewing window cleaning apparatus by said first connection member and said process chamber being coupled to an opposite side of the viewing window cleaning apparatus by said second connection member.

Claim 22 (Original): The improved process chamber as recited in claim 21, wherein said mounting further comprises a gas injection system coupled to said cleaning plasma region.

Claim 23 (Original): The improved process chamber as recited in claim 21, wherein said viewing window cleaning apparatus comprises a RF source.

Claim 24 (Original): The improved process chamber as recited in claim 21, wherein said viewing window cleaning apparatus comprises a plasma generator.

Claim 25 (Original): The improved process chamber as recited in claim 21, wherein said mounting further comprises at least one array of magnets coupled to said mounting.

Claim 26 (Original): The improved process chamber as claimed in claim 25, wherein at least one of said magnets of the array comprises a permanent magnet.

Claim 27 (Original): The improved process chamber as claimed in claim 25, wherein at least one of said magnets of the array comprises an electromagnet.

Claims 28-33 (Canceled).

Claim 34 (New): The viewing port of claim 1, further comprising ISO-KF hardware connecting the connection member to a wall of the process chamber.

Claim 35 (New): The viewing port of claim 3, wherein the entire outer housing containing the impedance match assembly and the plasma generator therein is positioned between the viewing window and process chamber.

Claim 36 (New): The viewing port of claim 1, wherein the mounting further comprises:

a plurality of magnets configured to reduce cross field transport between the plasma chamber and the viewing window, and

a gas injection system internal to the mounting so as to generate pressure inside the mounting to reduce the amount of reaction by-products entering the mounting from the process chamber and diffusing to the viewing window,

a supporting section configured to support the viewing window at a predetermined position relative to the process chamber.

Claim 37 (New): The viewing port of claim 21, further comprising IS0-KF hardware connecting the connection member to a wall of the process chamber.

Claim 38 (New): The viewing port of claim 21, wherein the viewing window cleaning apparatus comprises an outer housing containing an impedance match assembly and a plasma generator therein, the entire outer housing being positioned between the viewing window and process chamber.

Claim 39 (New): The viewing port of claim 21, wherein the mounting further comprises:

a plurality of magnets configured to reduce cross field transport between the plasma chamber and the viewing window,

a gas injection system internal to the mounting so as to generate pressure inside the mounting to reduce the amount of reaction by-products entering the mounting from the process chamber and diffusing to the viewing window, and

a supporting section configured to support the viewing window at a predetermined position relative to the process chamber.